



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,712	03/01/2002	Jefferson W. Hall	ONS00030P	1971

7590 07/16/2003  
ON Semiconductor  
Patent Administration Dept - MD A700  
P.O Box 62890  
Phoenix, AZ 85082-2890

EXAMINER

NGUYEN, LONG T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

10/087,712

Applicant(s)

HALL ET AL.

Examiner

Long Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-40 is/are pending in the application.
- 4a) Of the above claim(s) 23-32, 39 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33-37 is/are rejected.
- 7) ☒ Claim(s) 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of specie III (Figure 7) in Paper No. 8 and 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The claims read on specie III (Figure 7) are claims 33-38. Note that claim 39 and newly added claim 40 are not reading on Figure 7 because Figure 7 does not show a level-shift circuit receiving the differential amplified signal and outputting a differential level-shifted signal. Further note that the level-shift circuit receiving the differential amplified signal and outputting a differential level-shifted signal is shown in Figure 9, and therefore claim 39 and newly added claim 40 are read on Figure 9. Therefore, claims 39 and 40 are also withdrawn from further consideration by the examiner as being drawn to a non-elected invention. Note that claims 23-32 are non-elected by applicants.

### ***Response to Amendment***

2. The amendment filed on 5/29/03 has been received and entered in the case.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 33-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Endo (USP 5,168,175).

With respect to claim 33, Figure 6 of the Endo reference discloses an amplifier circuit, which includes: a gain stage (54, 57, 59) having an input (junction of resistors 52 and 53 which connected to the input of amplifier 54) for receiving an input signal and first and second outputs (output of 54 and output of 59) for providing a differential amplified signal; and an output stage (45', 46) including first and second depletion mode transistors (transistors 45' and 46 are depletion mode transistors as can be seen on lines 27-30 of Col. 8) operating in response to the differential amplified signal (gates of transistors 45' and 46 receive the outputs of amplifiers 54 and 59) and serially coupled between a supply terminal (51) and an output of the amplifier circuit (48) for providing an output signal (48).

With respect to claim 34, Figure 6 of the Endo reference shows that the circuit including a feedback path (52, 53) from the output (48) of the circuit to the input of the gain stage (resistor 52 connected from output 48 of the circuit to the input of the gain stage) to reduce the gain of the amplifier circuit (this functional limitation is met because the structure of the claim is fully met, In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)).

With respect to claim 35, Figure 6 shows the feedback path (52, 53) including a first resistor (52) coupled between the output (48) of the amplifier circuit and the input of the gain stage; and a second resistor (53) coupled between the input of the gain stage and a reference node (50).

With respect to claim 36, because the structure of the claim is fully met, so it also meets the functional limitation that the amplifier circuit functions as a voltage regulator; and Figure 6

also shows a reference voltage (58) is applied to the second input of the gain stage to maintaining the output signal (48) at a constant potential (again, this functional limitation is met because the structure of the claim is fully met, In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)).

With respect to claim 37, because Figure 6 of the Endo reference meets all the structure of the claim limitation, so it also meets the result limitation that a difference between a supply voltage at the voltage terminal and the constant potential of the output signal is less than 0.2 volts (MPEP 2112.01, In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)).

#### *Allowable Subject Matter*

5. Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 38 would be allowed because the prior art of record fails to disclose or suggest that, in combination with other limitations, the first depletion mode transistor is an n-channel device and the second depletion mode transistor is a p-channel device with the recited connections set forth therein.

#### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (703) 308-6063. The Examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

Application/Control Number: 10/087,712

Page 5

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (703) 308-4876. The fax number for this group is (703) 872-9318. The After Final fax number is (703) 872-9319.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0956.

LN

Date: 7/9/03



Long Nguyen  
Art Unit: 2816